



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,130	11/26/2001	Anthony Zampini	50751	7315

7590

04/18/2003

Peter F. Corless
EDWARDS & ANGELL, LLP
Dike, Bronstein, Roberts & Cushman, IP Group
P.O. Box 9169
Boston, MA 02209

EXAMINER

EVERHART, CARIDAD

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/994,130

Applicant(s)

ZAMPINI ET AL

Examiner

Caridad M. Everhart

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18,31-33,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18,31-33,35 and 36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: ____.

~~**Claim Rejections - 35 USC § 103**~~

Claim Objections

Claim 32 is objected to because of the following informalities: claim 32 is dependent upon canceled claim 29. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 2825

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujishiro, et al. (US 6,495,299B1).

Fujishiro discloses the steps of applying a photoresist and exposing the photoresist to radiation to develop the photoresist (col. 14, lines 22-25 and col. 16, lines 60-64). The photoresist is obtained from a polyol such as bisphenol (col. 4, lines 40-45)

Application/Control Number: 09/994,130

Art Unit: 2825

and a compound containing a methylene group(col. 4, lines 60-65). A photoactive component is also present (col. 5, lines 65-68). The sensitivity of the photoresist is within the wavelength recited in the instant claims (Table 2, col. 12 shows wavelength below the recited wavelengths).

Claim Rejections - 35 USC § 103

Claims 1-15, 17, 18, 31-33, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malik (US 6,133,412) in view of Pawlowski (US 6,277,750B1).

Malik discloses a composition and a method for forming photoresist for lithography of electronics(col. 1, lines 16-20 and col. 1, lines 10-13). The steps of coating a substrate and developing the photoresist are disclosed(col. 5, lines 1-8). The photoresist contains hydroxy and phenolic groups (col. 5, lines 20-35) and are reacted with ketone(col. 5, lines 30-35 and 50-58). In addition, fluorine and other electronegative groups may be included (col. 6, lines 37-43). The wavelengths disclosed for the photoresist are in the deep UV which are wavelengths within the ranges recited in the instant claims (col. 1, lines 53-57). The photoresist is positive(col. 1, lines 25-27).

Malik discloses ketones rather than aldehydes and is silent with respect to acetals.

Pawlowski teaches the equivalence of aldehydes and ketones in the reaction in a photoresist which results in the formation of acetals(col. 8, lines 30-40).

In view of the teaching of the equivalence of aldehydes and ketones in the reaction of the formation of acetals in the reaction in a photoresist with groups which are

common to the two above references, it would have been obvious to one of ordinary skill in the art that acetals are formed in the composition taught by Malik, and that aldehydes can be substituted for ketones in the composition taught by Malik.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park, et al. ("Park")(US 5,916,995).

Park discloses a negative photoresist which is coated on a substrate and developed and which is obtained by reaction of an aromatic hydroxy and an acetal-containing alkyl halide(col. 6, lines 15-20, abstract, and col. 1, lines 12-15 and 20-24).

Although the steps of coating and developing are not explicitly stated, these steps are implied by the portions of Park cited above in that the formation of patterning and the steps in lithography imply these steps.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 703-308-3455. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 703-308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Application/Control Number: 09/994,130
Art Unit: 2825

Page 6

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

C. Everhart
CARIDAD EVERHART
PRIMARY EXAMINER

C. Everhart
April 10, 2003